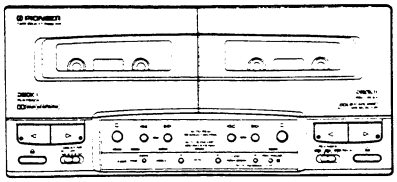
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
ARP2633

STEREO DOUBLE CASSETTE DECK

CT-P930WR
CT-P830WR
CT-P730WR

CT–P930WR, CT–P830WR AND CT–P730WR HAVE THE FOLLOWING:

Type	Model			Power Requirement	Remarks
	CT–P930WR	CT–P830WR	CT–P730WR		
AB	○	–	○	AC power supplied from power transformer's secondary of other system component	
ADL	–	○	○		
AEM	○	○	○		

- This manual is applicable to the following: CT–P930WR/AB and AEM; CT–P830WR/ ADL and AEM; CT–P730WR/AB, ADL and AEM.
- For the following: CT–P930WR/AEM; CT–P830WR/ADL and AEM; CT–P730WR/ AB, ADL and AEM, refer to page 25.
- These products are system(s) component.
  Each of these products does not function properly when independent; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
  These product's instructions are contained within the operating instructions manual of the related system component(s).
  These product's accessories etc. are packed with their related component(s).

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1. EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

1.1 EXTERIOR

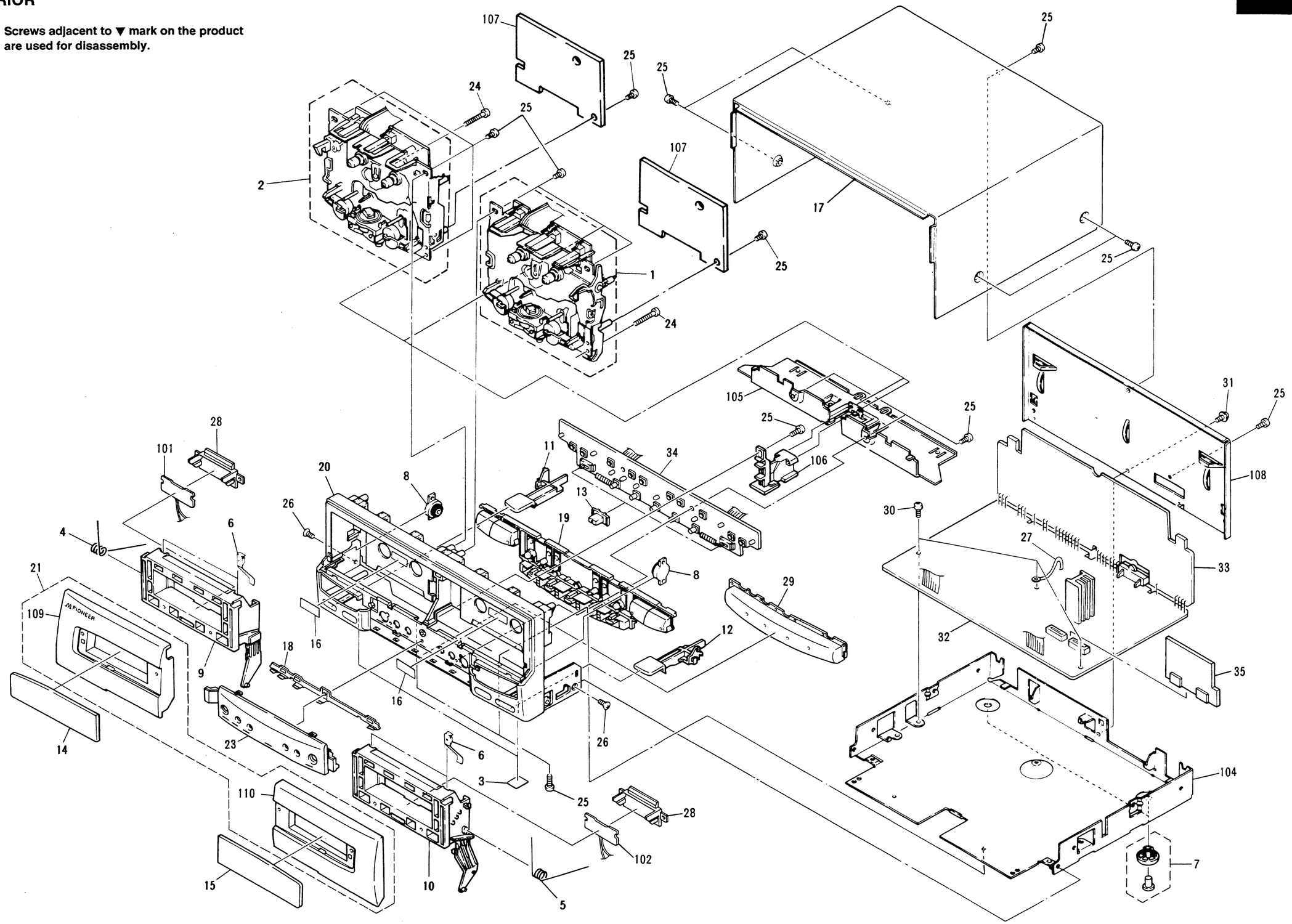
Parts List

Mark	No.	Description	Part No.
⊙	1	Mechanism unit II	EXK2217
⊙	2	Mechanism unit I	EXK2227
	3	Rubber sheet	AEB1111
	4	Door coil spring (L)	RBH1301
	5	Door coil spring (R)	RBH1302
	6	Half pressure spring	RBK1004
	7	Leg assembly	REC – 434
	8	Damper assembly	REC1005
	9	Door pocket (L)	RNK1843
	10	Door pocket (R)	RNK1844
	11	Eject knob (L)	RAC1729
	12	Eject knob (R)	RAC1730
	13	Slide knob	RAC1731
	14	Door lens (L)	RAH2100
	15	Door lens (R)	RAH2101
	16	Remain display paper	REE – 113
	17	Bonnet	RNA1469
	18	REC lens	RNK1848
	19	Operation button assembly	RXA1517
	20	Front panel	RAH2137
	21	Door panel	RAH2138
	22	.....	
	23	Center panel	RAH2139
	24	Scerw	BPZ30P250FMC
	25	Screw	BBZ30P080FZK
	26	Screw	CBZ30P080FZK
	27	Cord clamper	RNH – 184
	28	Spot lens	RNK1847
	29	Center knob	RAC1727
	30	Screw	BBZ30P080FMC
	31	Screw	IPZ30P050FZK
	32	MAIN unit	RWZ2717
	33	REAR unit	RWZ2718
	34	OPERATE unit	RWZ2715
	35	DOLBY HX PRO unit	RWZ2716

Mark	No.	Description	Part No.
NSP	101	HALF LED 1 unit	RWZ2719
NSP	102	HALF LED 2 unit	RWZ2720
	103	.....	
NSP	104	Main Chassis	RNB1084
NSP	105	Mechanism shield plate	RNE1555
NSP	106	Center bracket	RNK1845
NSP	107	Mechanical cover board	RNZ2282
NSP	108	Rear panel	RNA1618
NSP	109	Door panel (L)	REA1021
NSP	110	Door panel (R)	REA1022

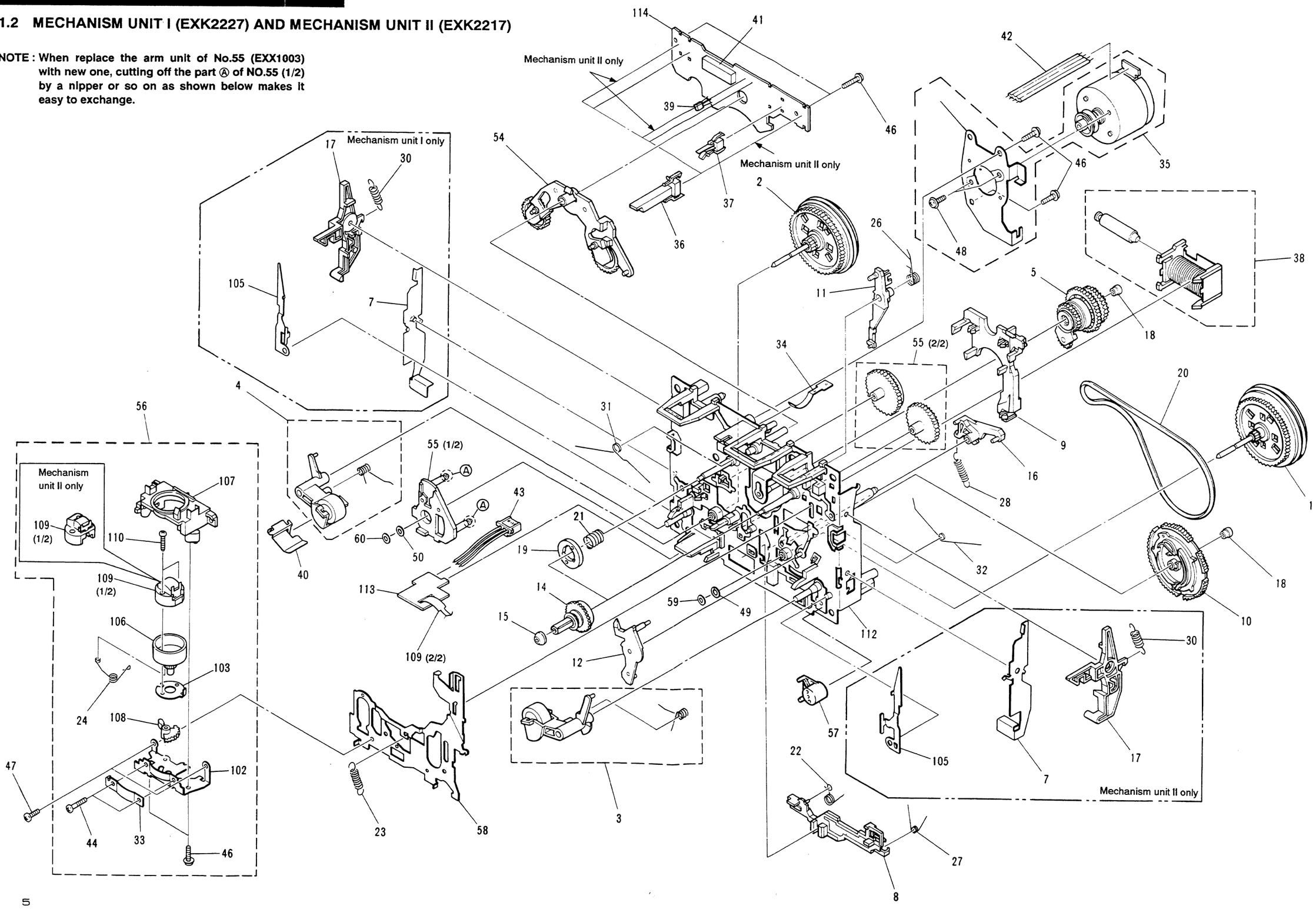
EXTERIOR

NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.



1.2 MECHANISM UNIT I (EXK2227) AND MECHANISM UNIT II (EXK2217)

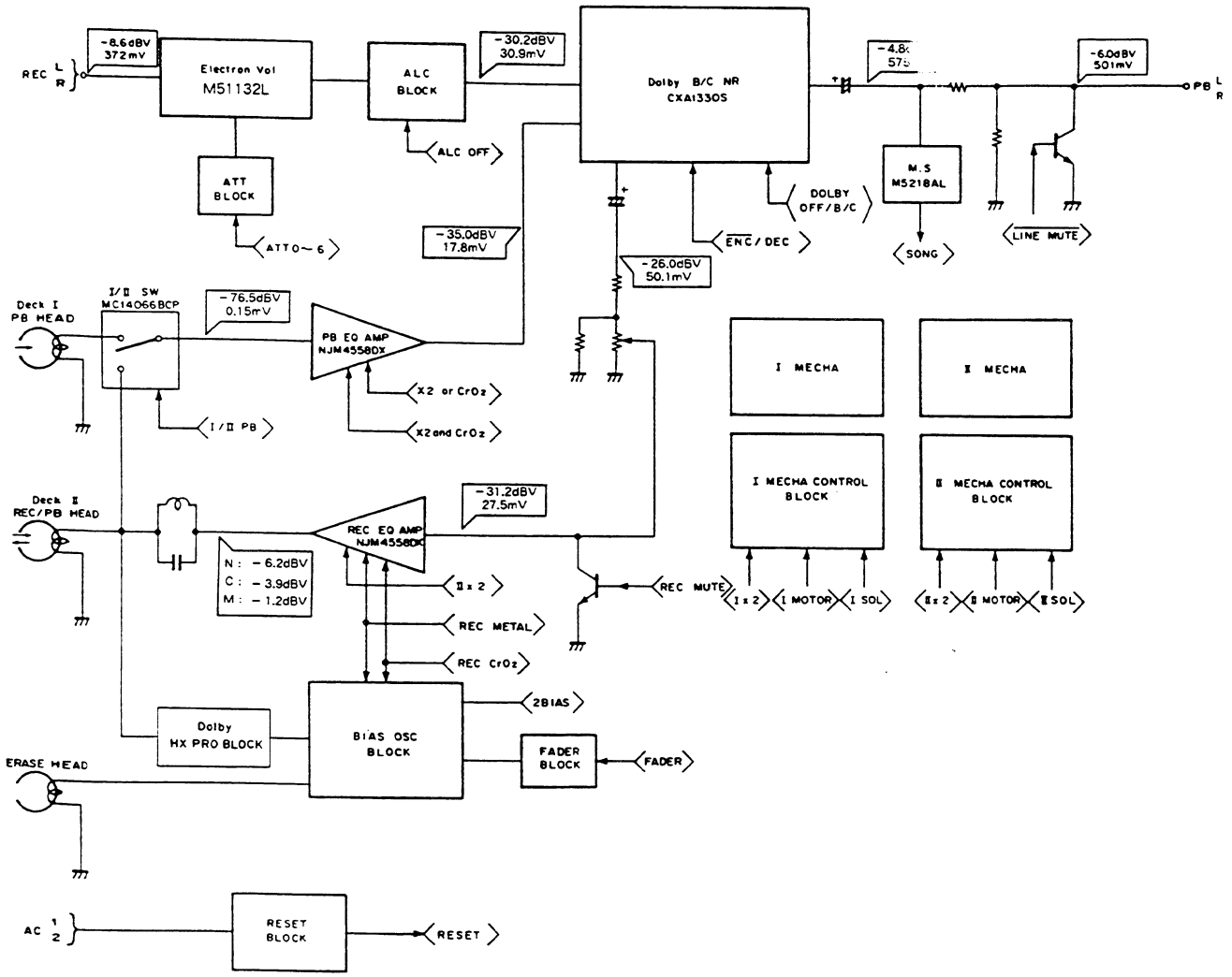
NOTE : When replace the arm unit of No.55 (EXX1003) with new one, cutting off the part Ⓐ of NO.55 (1/2) by a nipper or so on as shown below makes it easy to exchange.



Parts List

Mark	No.	Description	Part No.
	1	Flywheel unit (FWD)	EXA1232
	2	Flywheel unit (RVS)	EXA1233
	3	Pinch roller unit (FWD)	EXA1224
	4	Pinch roller unit (RVS)	EXA1225
	5	Limiter unit	EXA1226
	6	.....	
	7	Eject lever L2 (Mechanism unit I)	AZN2063
		Eject lever R2 (Mechanism unit II)	AZN2064
	8	Lever	ENV1305
	9	Brake	ENV1317
	10	Gear	ENV1369
	11	Arm	ENV1159
	12	Arm	ENV1163
	13	.....	
	14	Reel	ENV1335
	15	Bush	ENV1338
	16	Arm	ENV1330
	17	Eject lever L1 (Mechanism unit I)	AZN2108
		Eject lever R1 (Mechanism unit II)	AZN2109
	18	Bush	ENV1184
	19	Magnet	ENV1336
	20	Belt	ENT1023
	21	Spring	EBH1424
	22	Spring	EBH1401
	23	Spring	EBH1203
	24	Spring	EBH1402
	25	.....	
	26	Spring	EBH1406
	27	Spring	EBH1407
	28	Spring	EBH1408
	29	.....	
	30	Spring	EBH1409
	31	Spring	EBH1410
	32	Spring	EBH1256
	33	Spring	EBL1013
	34	Spring	EBL1014
	35	Motor unit	EXA1241
	36	Switch (Detect)	ESN1003
	37	Switch (Mode)	ESN1004
	38	Solenoid	EXP1005
	39	Hall IC	DN6847SE
	40	Bracket	ENC1336
	41	Connector (10P) (Mechanism unit I)	EKS1013
		Connector (15P) (Mechanism unit II)	EKS1012
	42	Wire (4P)	EDD1003
	43	Connector (Mechanism unit I)	EDE1015
		Connector (Mechanism unit II)	EDE1014
	44	Screw	EBA1020
	45	.....	
	46	Screw (M2 × 8)	ATZ20P080FMC
	47	Screw	BSZ20P060FMC
	48	Screw	PMS26P025FUC
	49	Washer	EBF1008
	50	Washer	EBF1009
	51	.....	
	52	.....	
	53	.....	
	54	Arm unit	EXX1006
	55	Arm unit	EXX1003
	56	Head frame assembly (Mechanism unit I)	EXX1008
		Head frame assembly (Mechanism unit II)	EXX1007
	57	Arm	ENV1283
	58	Head chassis unit	EXA1230
	59	Washer	EBF1010
	60	Washer	EBF1011
	101	.....	
NSP	102	Bracket	ENC1284
NSP	103	Plate	ENC1285
NSP	104	Bracket	ENC1199
NSP	105	Arm (Mechanism unit I)	ENC1288
		Arm (Mechanism unit II)	ENC1289
NSP	106	Holder	ENV1161
NSP	107	Holder	ENV1301
NSP	108	Gear	ENV1177
NSP	109	Head unit (Mechanism unit I)	EXA1110
		Head unit (Mechanism unit II)	EXA1109
NSP	110	Screw	JGZ14P085FNI
	111	.....	
NSP	112	Chassis unit	EXX1001
NSP	113	PC board	ENP1056
NSP	114	PC board (Mechanism unit I)	ENP1053
		PC board (Mechanism unit II)	ENP1055

2. BLOCK DIAGRAM



3. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10^1 → 561 ····· RD1/8PM[5][6][1]J
47k Ω → 47 × 10^3 → 473 ····· RD1/4PS[4][7][3]J
0.5 Ω → 0R5 ····· RN2H[0][R][5]K
1 Ω → 010 ····· RS1P[0][1][0]K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^1 → 5621 ····· RN1/4PC[5][6][2][1]F

Mark	No.	Description	Part No.
		LIST OF ASSEMBLIES	
		OPERATE UNIT	RWZ2715
		DOLBY HX PRO UNIT	RWZ2716
		MAIN UNIT	RWZ2717
		REAR UNIT	RWZ2718
NSP		HALF LED 1 UNIT	RWZ2719
NSP		HALF LED 2 UNIT	RWZ2720
		OPERATE UNIT	
		SEMICONDUCTORS	
	D846, D847, D850, D860		SEL6C10R
	D841-D844		SEL6410G
	D851		SEL6910A
	D801-D804		1SS254
		SWITCHES	
	S811-S813, S815, S816, S819-S821, S823, S824		RSG1033
	S814, S817, S818, S822, S825		RSG1034
	S849, S850		RSH1030
		RESISTORS	
	ALL RESISTORS		RD1/6PM□□□J
		DOLBY HX PRO UNIT	
		SEMICONDUCTORS	
	IC901		UPC1297CA
	Q701, Q702		2SA1309A
	Q703, Q704		XDC124ES
	D702		1SS254
		COILS	
	L701, L702		RTD1046
		CAPACITORS	
	C709, C710		CCCSL101K500
	C715, C717		CEAS100M50
	C716		CEAS4R7M50
	C701, C702		CFTXA103J50
	C705, C706		CFTXA223J50
	C714		CGCYX104M25
	C707, C708		CGCYX473K25
	C713		CKPUYB101K50
	C703, C704		CKPUYB821K50
	C711, C712		RCG1005
		RESISTORS	
	VR701, VR702(22kΩ)		RCP1084
	OTHER RESISTORS		RD1/6PM□□□J
		OTHERS	
	CN510 5P PCB CONNECTOR		05JQ-ST
	CN520 6P PCB CONNECTOR		06JQ-ST
		MAIN UNIT	
		SEMICONDUCTORS	
	IC701		M51132L
	IC801		PD3227A
⚠	IC1001		NJM78M06FA
⚠	IC1002		RC79M06FA
⚠	IC1003		NJM7805FA
⚠	IC1004		NJM7812FA
	Q578, Q601, Q821, Q822		DTC143ES
	Q571, Q579, Q609		XDA124ES
	Q801, Q802		XDA144ES
	Q805, Q806, Q817, Q823, Q824		XDC114ES
	Q484, Q485, Q495-Q501, Q828		XDC124ES
	Q606, Q850-Q853		2SA1283
	Q483, Q816, Q1001		2SA1309A
	Q580, Q583		2SB1238X
	Q493, Q494		2SC1740SLN
	Q581, Q582		2SC1815
	Q605		2SC3243
⚠	Q1004		2SC3246
	Q572, Q584, Q585, Q604, Q607, Q1002, Q1003		2SC3311A
	Q481, Q482, Q814		2SD2144S
	D1010		MTZJ11B
	D604		MTZ9.1B
⚠	D1001-D1004		1SR35-100AVL
	D1005, D1009		1SR35-100AVL
	D581		1SS252
	D491, D492, D580, D582, D583, D605, D805, D806, D808-D814, D816, D819, D837, D838, D870, D1006-D1008, D1011, D1012		1SS254
		COILS	
	L580		LFA121K
	L581		RTD1062
		CAPACITORS	
	C600		CEASR22M50
	C495		CEASR33M50
	C580		CEASR47M50
	C496, C587, C601, C602, C604, C607, C643, C1016		CEAS100M50
	C1013, C1019		CEAS101M25
	C1010		CEAS102M25
	C591, C593		CEAS220M50
	C1006, C1007, C1011		CEAS221M10
	C642, C1014		CEAS221M16
	C1004, C1005		CEAS222M25
	C585, C586		CEAS330M16
	C606, C1017		CEAS4R7M50
	C603, C605, C608, C1020		CEAS470M16
	C581		CFTXA223J50
	C582-C584		CFTXA332J50
	C805		CKCYB152K50
	C806		CKCYF103Z50
	C804, C1001, C1002		CKCYF473Z50
	C403		CQPA752J100
		RESISTORS	
	R854		RA13T473J
	R855		RA7T103J
	R856		RA8T103J
	R408		RCN1022
	R527, R528(22kΩ)		RCN1023
	R585, R1011(160Ω)		RCN1026
	R586(200Ω)		RCN1036
	VR521, VR522(22kΩ)		RCP1046
	VR803(1kΩ)		RCP1112
	VR801, VR802		VRTG6VS223
	OTHER RESISTORS		RD1/6PM□□
		OTHERS	
	CN51 CONNECTOR		B5B-XH-A
	CN52 CONNECTOR		B6B-XH-A
	CN 15P SOCKET		AKP1090
	X801 CERAMIC RESONATOR(F=4.19MHz)		VSS1014
		REAR UNIT	
		SEMICONDUCTORS	
	IC201		CXA1330S
	IC101		MC14066BCP
	IC601		M5218AL
	IC102, IC302		NJM4558DX
	IC301		SN74LS05N
	Q527, Q528, Q602, Q603, Q608		XDC124ES
	Q411, Q412, Q431-Q436, Q439, Q440, Q453, Q491, Q492		2SC3311A

erefore, when replacing, be sure

nay be unavailable.

erance is shown by J=5%, and

on	Part No.
	CGCYX473K25
	CKPUYB101K50
	CKPUYB821K50
	RCG1005
	RCP1084
	RD1/6PM□□□J
	05JQ-ST
	06JQ-ST
	M51132L
	PD3227A
	NJM78M06FA
	RC79M06FA
	NJM7805FA
	NJM7812FA
	DTC143ES
	XDA124ES
	XDA144ES
	XDC114ES
	XDC124ES
	2SA1283
	2SA1309A
	2SB1238X
	2SC1740SLN
	2SC1815
	2SC3243
	2SC3246
Q1002,	2SC3311A
	2SD2144S
	MTZJ11B
	MTZ9.1B
	1SR35-100AVL
	1SR35-100AVL
	1SS252

Mark	No.	Description	Part No.
	D491, D492, D580, D582, D583, D605, D805, D806, D808-D814, D816, D819, D837, D838, D870, D1006-D1008, D1011, D1012		1SS254
COILS			
	L580		LFA121K
	L581		RTD1062
CAPACITORS			
	C600		CEASR22M50
	C495		CEASR33M50
	C580		CEASR47M50
	C496, C587, C601, C602, C604, C607, C643, C1016		CEAS100M50
	C1013, C1019		CEAS101M25
	C1010		CEAS102M25
	C591, C593		CEAS220M50
	C1006, C1007, C1011		CEAS221M10
	C642, C1014		CEAS221M16
	C1004, C1005		CEAS222M25
	C585, C586		CEAS330M16
	C606, C1017		CEAS4R7M50
	C603, C605, C608, C1020		CEAS470M16
	C581		CFTXA223J50
	C582-C584		CFTXA332J50
	C805		CKCYB152K50
	C806		CKCYF103Z50
	C804, C1001, C1002		CKCYF473Z50
	C403		CQPA752J100
RESISTORS			
	R854		RA13T473J
	R855		RA7T103J
	R856		RA8T103J
	R408		RCN1022
	R527, R528(22kΩ)		RCN1023
	R585, R1011(160Ω)		RCN1026
	R586(200Ω)		RCN1036
	VR521, VR522(22kΩ)		RCP1046
	VR803(1kΩ)		RCP1112
	VR801, VR802		VRTG6VS223
	OTHER RESISTORS		RD1/6PM□□□J
OTHERS			
	CN51 CONNECTOR		B5B-XH-A
	CN52 CONNECTOR		B6B-XH-A
	CN 15P SOCKET		AKP1090
	X801 CERAMIC RESONATOR(F=4.19MHz)		VSS1014

REAR UNIT

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC201		CXA1330S
	IC101		MC14066BCP
	IC601		M5218AL
	IC102, IC302		NJM4558DX
	IC301		SN74LS05N
	Q527, Q528, Q602, Q603, Q608		XDC124ES
	Q411, Q412, Q431-Q436, Q439, Q440, Q453, Q491, Q492		2SC3311A
	Q523, Q524		2SD2144S
	Q413, Q414		2SK373
	D411-D420, D430, D431, D601, D602		1SS254
COILS/FILTERS			
	L523, L524		RTF1020
	F493, F494		RTF1062
	L451, L452		RTF1099
	L521, L522		RTF1102
CAPACITORS			
	C421, C422		CCCSL100D50
	C638		CCCSL101J50
	C640		CCCSL560J50
	C419, C420		CEANL100M16
	C215, C216		CEASR22M50
	C217, C218, C223, C224		CEASR33M50
	C549		CEASR47M50
	C439, C440, C491, C492, C497, C498, C521-C524		CEAS010M50
	C493, C494, C639, C903, C904		CEAS100M50
	C475, C476		CEAS101M16
	C209, C210, C531, C532, C645		CEAS2R2M50
	C433, C434, C525, C526		CEAS330M16
	C435, C436, C545, C546		CEAS470M16
	C529, C530		CFTXA182J50
	C535, C536		CFTXA183J50
	C211-C214		CFTXA222J50
	C641		CFTXA223J50
	C541-C544		CFTXA473J50
	C539, C540		CFTXA562J50
	C431, C432		CFTXA682J50
	C527, C528		CFTXA683J50
	C644		CFTXA823J50
	C411, C412		CKCYB331K50
	C441, C442		CKCYB391K50
	C413, C414		CKCYB471K50
	C533, C534		CKCYB681K50
	C415, C416		CKCYB821K50
	C423		CKCYF473Z50
	C547, C548		CKPUYB221K50
	C537, C538		CQMA752J50
RESISTORS			
	VR451-VR454(22kΩ)		RCP1084
	OTHER RESISTORS		RD1/6PM□□□J

HALF LED 1 UNIT

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D1101-D1104		SEL6410G
RESISTORS			
	R1101		RD1/6PM□□□J

HALF LED 2 UNIT

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D1201-D1204		SEL6410G
RESISTORS			
	R1201		RD1/6PM□□□J

4. PACKING

NOTES:

- Parts marked by "NSP" are generally unava
- The ⚠ mark found on some component pa to use parts of identical designation.
- Parts marked by "⊙" are not always kept i

Parts List

Mark	No.	Description
	1	Pad F
	2	Pad R
	3	Sheet
	4	Caution card (AB type only)
	5	Packing case

Mark	No.	Description	Part No.
		Q523, Q524	2SD2144S
		Q413, Q414	2SK373
		D411-D420, D430, D431, D601, D602	1SS254
COILS/FILTERS			
		L523, L524	RTF1020
		F493, F494	RTF1062
		L451, L452	RTF1099
		L521, L522	RTF1102
CAPACITORS			
		C421, C422	CCCSL100D50
		C638	CCCSL101J50
		C640	CCCSL560J50
		C419, C420	CEANL100M16
		C215, C216	CEASR22M50
		C217, C218, C223, C224	CEASR33M50
		C549	CEASR47M50
		C439, C440, C491, C492, C497, C498, C521-C524	CEAS010M50
		C493, C494, C639, C903, C904	CEAS100M50
		C475, C476	CEAS101M16
		C209, C210, C531, C532, C645	CEAS2R2M50
		C433, C434, C525, C526	CEAS330M16
		C435, C436, C545, C546	CEAS470M16
		C529, C530	CFTXA182J50
		C535, C536	CFTXA183J50
		C211-C214	CFTXA222J50
		C641	CFTXA223J50
		C541-C544	CFTXA473J50
		C539, C540	CFTXA562J50
		C431, C432	CFTXA682J50
		C527, C528	CFTXA683J50
		C644	CFTXA823J50
		C411, C412	CKCYB331K50
		C441, C442	CKCYB391K50
		C413, C414	CKCYB471K50
		C533, C534	CKCYB681K50
		C415, C416	CKCYB821K50
		C423	CKCYF473Z50
		C547, C548	CKPUYB221K50
		C537, C538	CQMA752J50
RESISTORS			
		VR451-VR454(22kΩ)	RCP1084
		OTHER RESISTORS	RD1/6PM□□□J

HALF LED 1 UNIT

SEMICONDUCTORS			
		D1101-D1104	SEL6410G
RESISTORS			
		R1101	RD1/6PM□□□J

HALF LED 2 UNIT

SEMICONDUCTORS			
		D1201-D1204	SEL6410G
RESISTORS			
		R1201	RD1/6PM□□□J

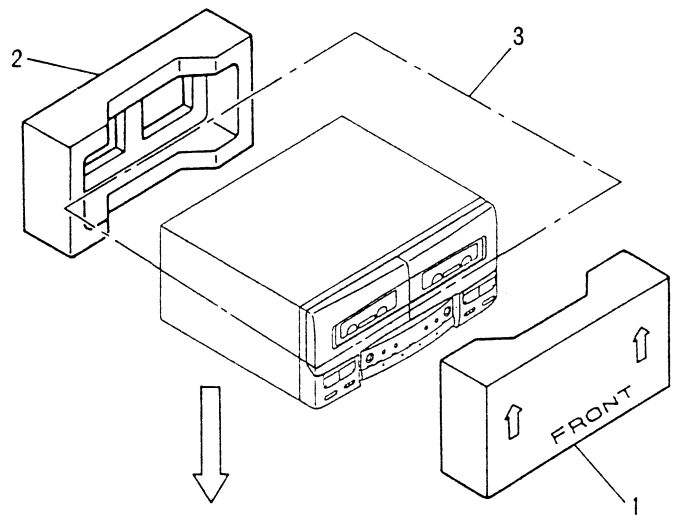
4. PACKING

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

Mark	No.	Description	Part No.
	1	Pad F	RHA1093
	2	Pad R	RHA1094
	3	Sheet	RHX1003
	4	Caution card (AB type only)	RRN1001
	5	Packing case	RHG1416



5. SCHEMATIC DIAGRAMS

REAR UNIT (RWZ2718)

Note:

1. When o
"PARTS
PARTS I
2. Since the
values of
ment.
3. RESISTOR
Unit: k:kΩ
Rated po
noted.
Tolerance:
less other
4. CAPACITO
Unit: p:pF
Ratings: c
Rated volt
5. COILS:
Unit: m:m
6. VOLTAGE
: DC
mA or

DOLBY B/C NR

-30.2dBV 30.9mV

-4.8dBV 575mV

-35.0dBV 17.8mV

-26.0dBV 50.1mV

-11.2dBV 275mV

IC201 CXA1330S

MPX

IC102 (1/2) NJM4558DX

IC102 (2/2) NJM4558DX

IC601 (1/2) MS218AL

IC601 (2/2) MS218AL

MS

ATT

L	Vcc/2	H
PB	REC	MPX REC

REC EQ AMP

REC

-31.2dBV 27.5mV

-32.4dBV 24.0mV

VR521 REC LEVEL Adj
VR522

LINE MUTE

TEST MODE

CPU PD3227A

IC801

FADE	FINE	64	R820 47K
2FWD	1REV	63	R858 47K
2REV	1FWD	62	R859 47K
2REC	APSC	61	R821 33K
DISCO	SDOUT	60	
KO0	KO5	59	R832 100K
KO1	KO4	58	R831 100K
KO2	KI5	57	R817 100K
KO3	KI4	56	R898 100K
2BIAS	PRESET	55	
FADR	SONG	54	
RchMUTE	GND	53	
PDET	OSC2	52	
1MOTOR	OSC1	51	R874 X801 1M VSS1014
1SOL	TEST	50	
2MOTOR	RESET	49	
2SOL	KI3	48	R822 100K
1SENS	KI2	47	R823 100K
2SENS	KI1	46	R824 100K
ENA/REQ	KI0	45	R825 100K
SD		44	
SCK		43	
XSCK	X1X2	42	R827 2.7K
ATT0	X2X2	41	R828 2.7K
ATT1	ENC	40	
ATT2	2PB	39	
ATT3	PBCR	38	
ATT4	PBX2	37	R855 10KX7
ATT5	RECCr	36	
ATT6	RECMET	35	
ALCO	RMUTE	34	
VCC	LMUTE	33	R829 2.7K

R856 10KX8

R891 18K17

R892 18K

R854 47KX13

1 MECHA UNIT(2/2) (EXK2227)

HALF LED1 UNIT

OPERATE UNIT (RWZ

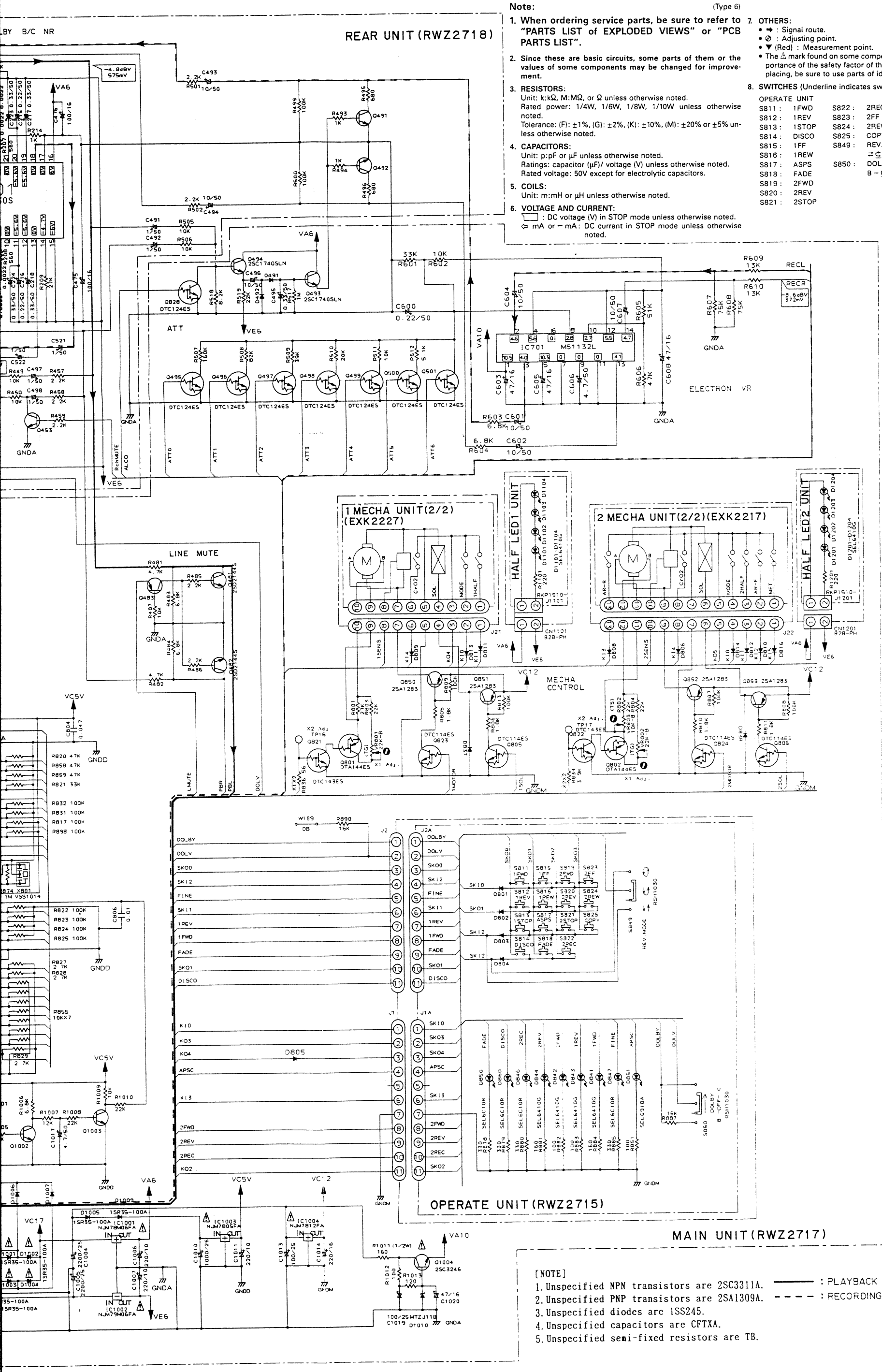
LOGIC

(Connect to prescribed components)

CN41 AKP1090

REC-R
REC-L
PB-R
PB-L
GND (CT)
CD-L
GND (CD)
CD-R
GND (CNTR)
TAPE R/E
S.DATA
S.CLK
R/E (CD)
AC2
AC1

[NOTE
1. Uns
2. Uns
3. Uns
4. Uns
5. Uns



Note: (Type 6)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭ : DC voltage (V) in STOP mode unless otherwise noted.
   ⇨ mA or ← mA: DC current in STOP mode unless otherwise noted.
7. **OTHERS:**
   - ➡ : Signal route.
   - ⊘ : Adjusting point.
   - ▼ (Red) : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SWITCHES** (Underline indicates switch position):

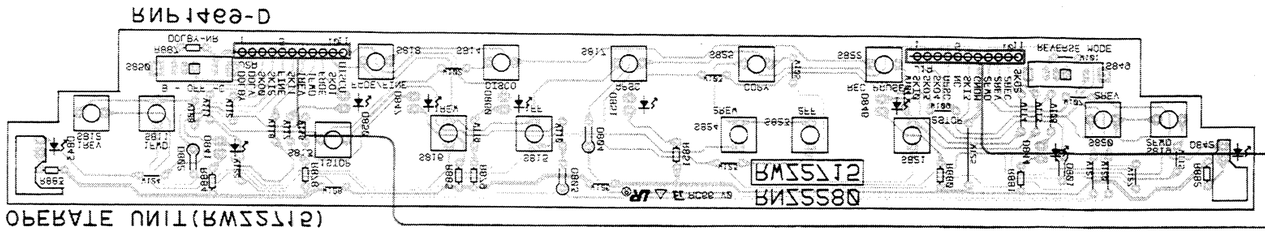
OPERATE UNIT			
S811 :	1FWD	S822 :	2REC
S812 :	1REV	S823 :	2FF
S813 :	1STOP	S824 :	2REW
S814 :	DISCO	S825 :	COPY
S815 :	1FF	S849 :	REV. MODE
S816 :	1REW		⇄ ⊆ ⊂
S817 :	ASPS	S850 :	DOLBY
S818 :	FADE		B – OFF – C
S819 :	2FWD		
S820 :	2REV		
S821 :	2STOP		

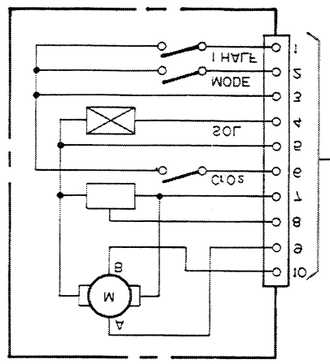
[NOTE]
1. Unspecified NPN transistors are 2SC3311A.
2. Unspecified PNP transistors are 2SA1309A.
3. Unspecified diodes are 1SS245.
4. Unspecified capacitors are CFTXA.
5. Unspecified semi-fixed resistors are TB.

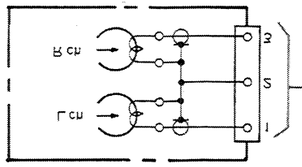
——— : PLAYBACK SIGNAL
- - - - : RECORDING SIGNAL

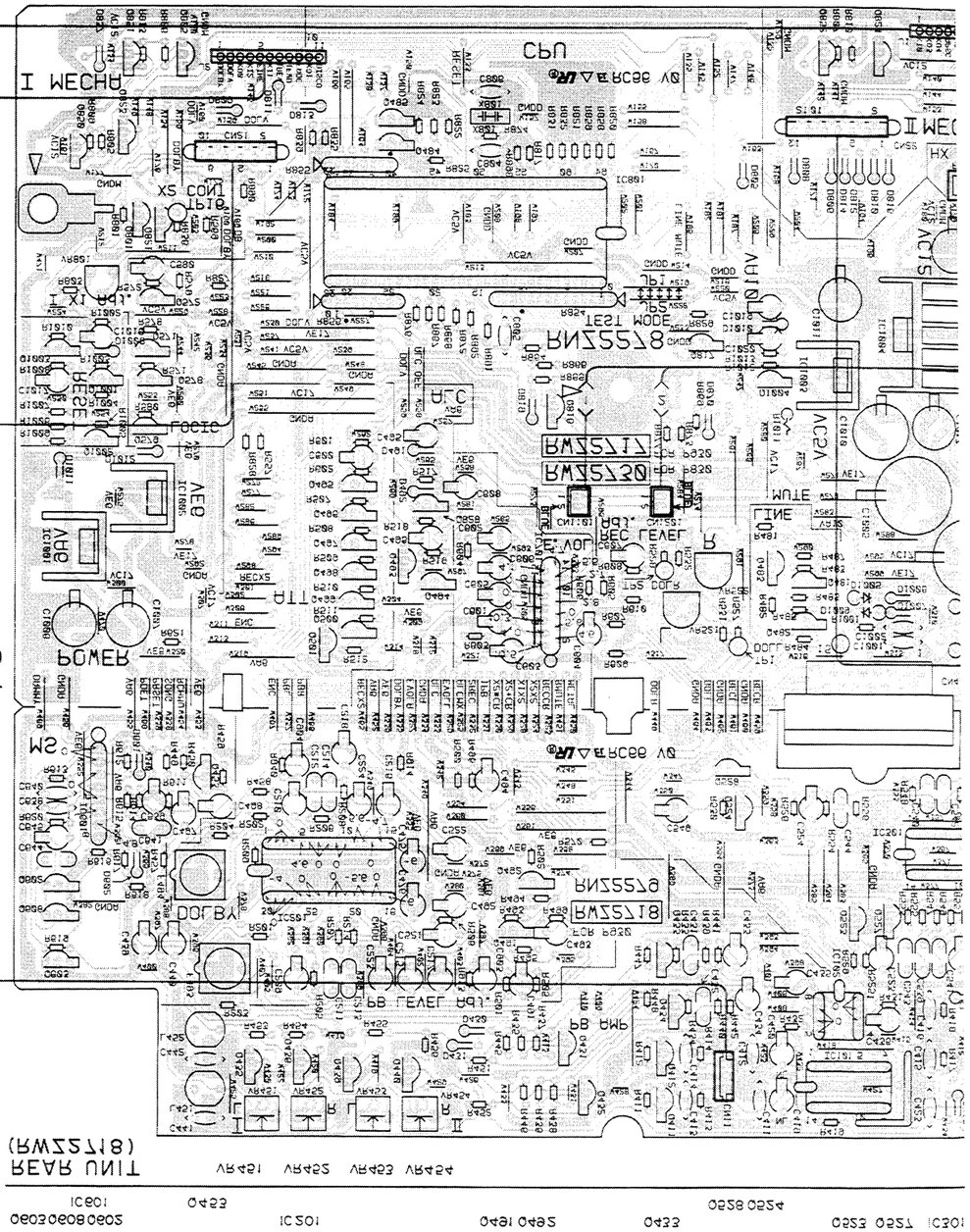
e. PCB CONNECTION DIAGRAMS

• View from soldering side

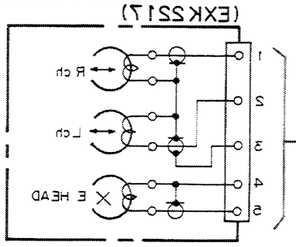




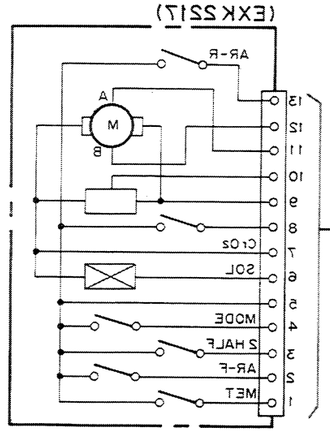




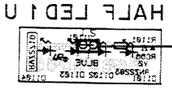
2 MECHA UNIT (1/2)
(EXK22217)



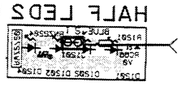
2 MECHA UNIT (2/2)
(EXK22217)



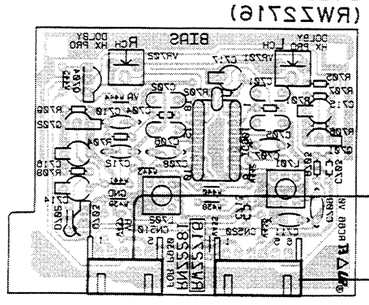
HALF LED1 UNIT



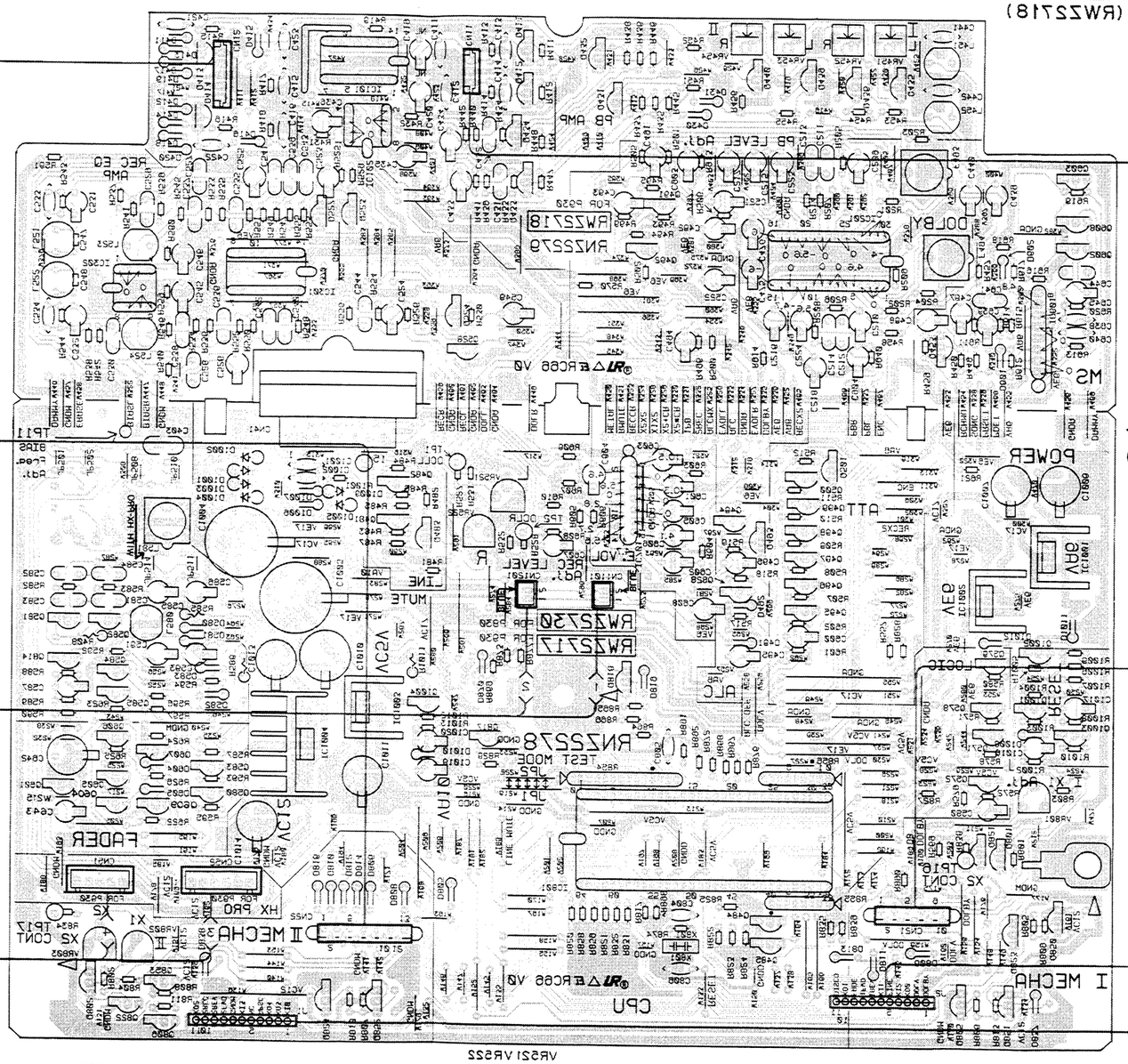
HALF LED2 UNIT



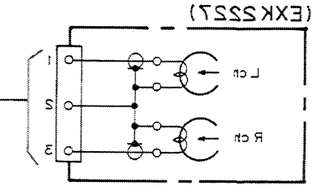
DOLBY HX PRO UNIT
(RWZ2715)



REAR UNIT
(RWZ2718)

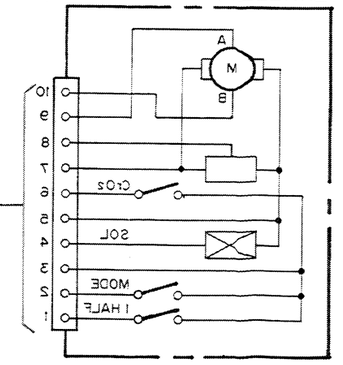


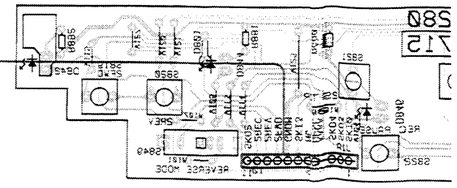
1 MECHA UNIT (1/2)
(EXK22217)



MAIN UNIT
(RWZ2717)

1 MECHA UNIT (2/2)
(EXK22217)



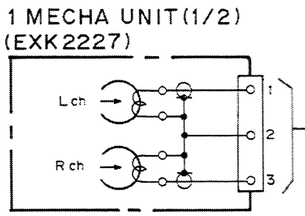


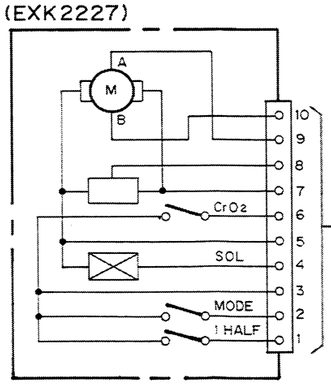
6. PCB CONNECTION DIAGRAMS

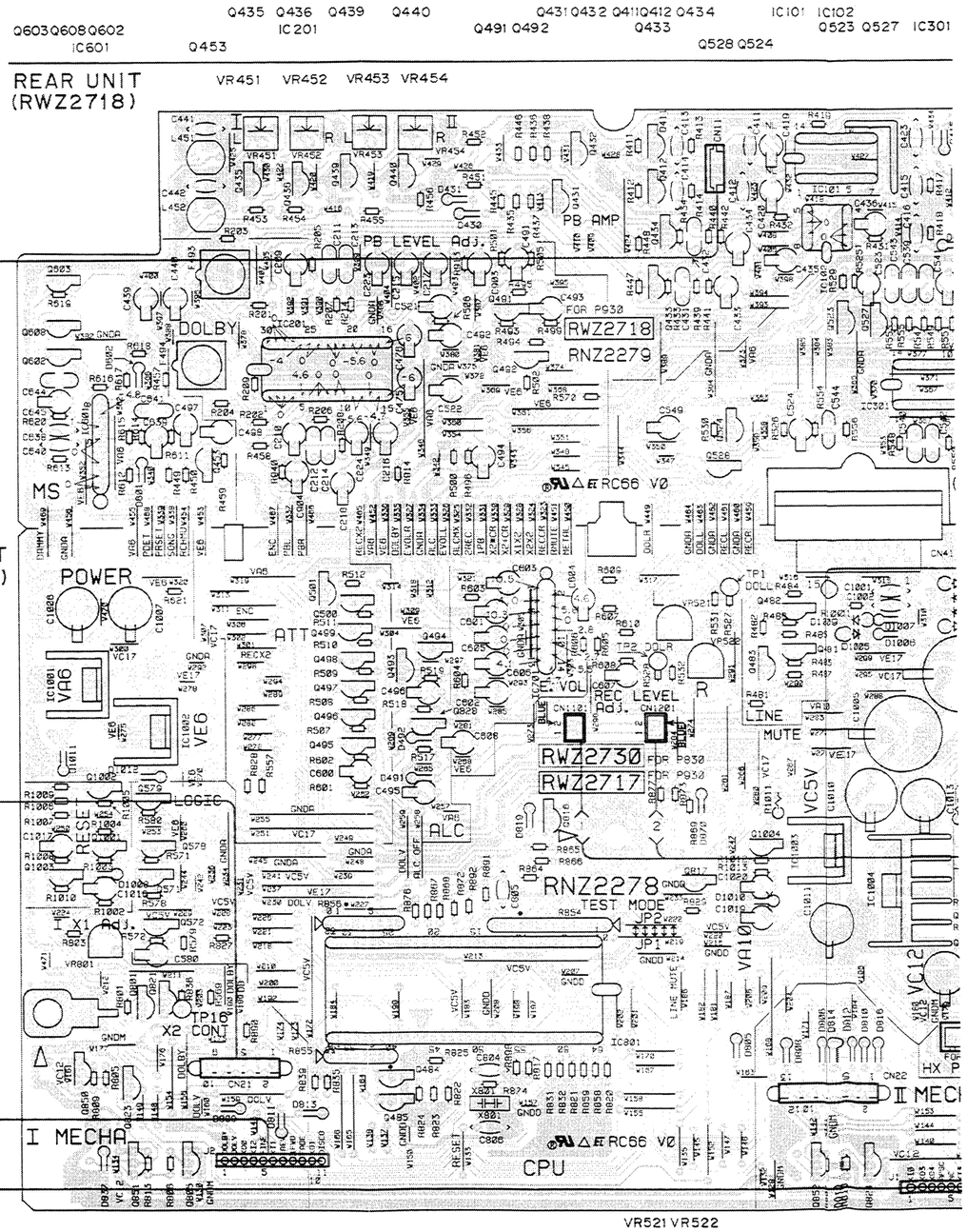
- View from component side

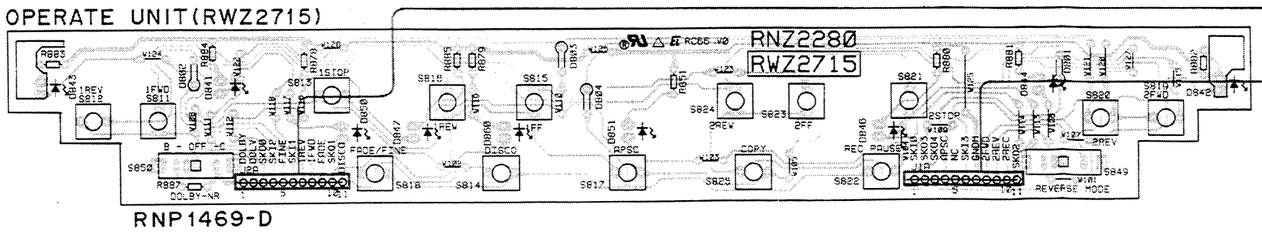
P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor			Ceramic capacitor
		FET			Mylar capacitor
					Styrol capacitor
		Diode			Electrolytic capacitor (Non polarized)
					Electrolytic capacitor (Noiseless)
		Zenner diode			Electrolytic capacitor (Polarized)
					Electrolytic capacitor (Polarized)
		LED			Power capacitor
		Varactor			Semi-fixed resistor
		Tact switch			Resistor array
					Resistor
		Inductor			
		Coil			Resonator
		Transformer			Thermistor
		Filter			

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ▷ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.







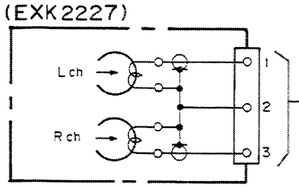


3 4 5 6 7 8

REAR UNIT
(RWZ2718)

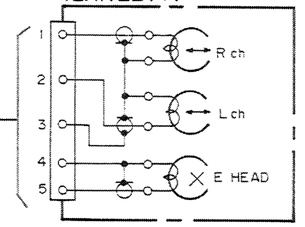
MAIN UNIT
(RWZ2717)

1 MECHA UNIT(1/2)
(EXK2227)

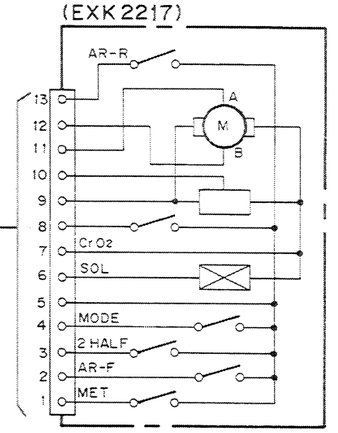


1 MECHA UNIT(2/2)
(EXK2227)

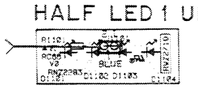
2 MECHA UNIT(1/2)
(EXK2217)



2 MECHA UNIT(2/2)
(EXK2217)

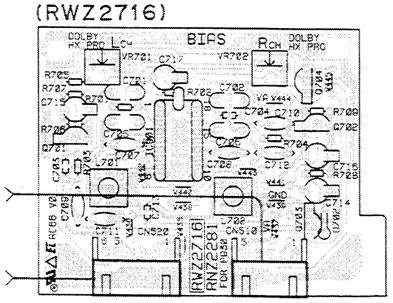


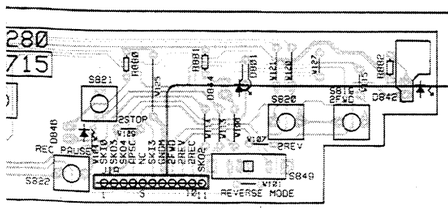
HALF LED1 UNIT



HALF LED2 UNIT

DOLBY HX PRO UNIT
(RWZ2716)





Q603 Q608 Q602 IC601 Q453 Q435 Q436 Q439 Q440 IC201 Q491 Q492 Q431 Q432 Q411 Q412 Q434 Q433 Q528 Q524 IC101 IC102 Q523 Q527 IC301 Q414 Q413 IC312

VR451 VR452 VR453 VR454

VR801 IC1001 Q1002 Q579 IC1002 Q1003 Q1001 Q578 Q571 Q801 Q821 Q572 Q850 Q823 Q851 Q805 Q501 Q500 Q499 Q498 Q497 Q493 Q494 Q496 Q495 Q828 IC801 Q484 Q485 IC701 Q816 Q817 Q1004 IC1003 IC1004 Q852 Q824 Q483 Q482 Q481 VR802 VR803 Q582 Q584 Q581 Q814 Q607 Q585 Q606 Q583 Q580 Q609 Q605 Q604 Q601 Q853 Q806 Q822 Q802

VR521 VR522

3 4 5 6 7 8 9 17

7. ADJUSTMENTS

7.1 MECHANICAL ADJUSTMENT

This adjustment should be performed in test mode.
- Entering the test mode. — Short circuit JP1 and JP2 inside the main unit and turn the power on.

1. Tape Speed Adjustment and Check

No.	Deck	Mode	Test tape	Adjusting points	Specifications/Ratings (playback frequency)	Remarks
1	I	Normal speed PLAY	STD-301 (3 kHz)	Playback for 1 minute and press the FF (REW) key. *1		
2		Double speed PLAY		check	6000 Hz ± 600 Hz (LINE OUT)	
3		Normal speed PLAY		Release the FF (REW) key after checking.		
4	II			Playback for 1 minute and press the FF (REW) key. *1		
5		Double speed PLAY		VR803	Within ± 10 Hz of step 2 (deck I) check value.	
6		Normal speed PLAY		Release the FF (REW) key after checking.		
7				VR802	3000 Hz ± 5 Hz (LINE OUT)	
8	I			VR801	Within ± 5 Hz of step 7 (deck II) adjustment value.	

*1: As long as the FF (REW) key is pressed during playback, the unit is double speed mode.

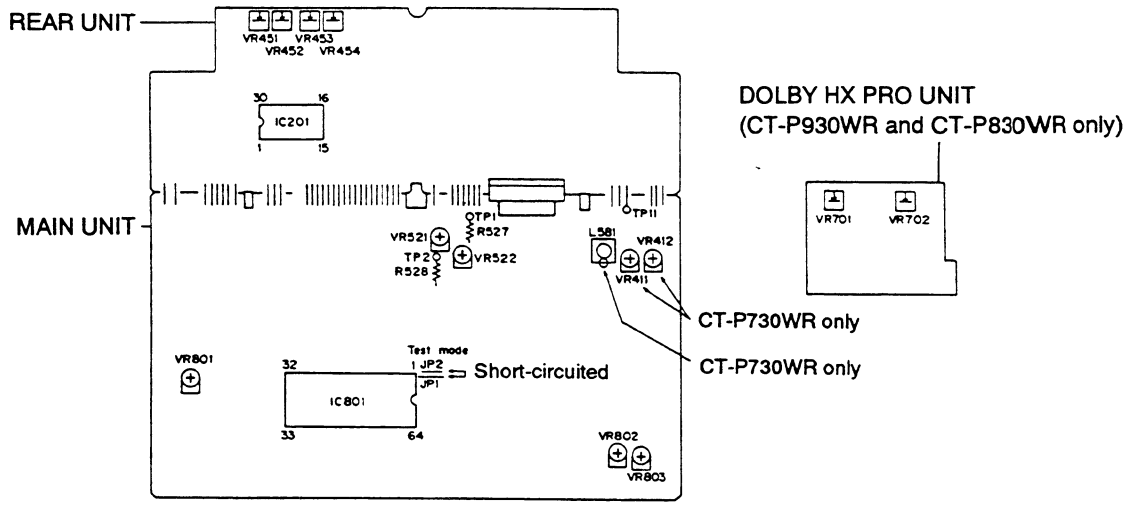


Fig. 7–1 Adjusting points

● Door Damp Check and Adjustment

1. Mount the door coil spring on the position Ⓐ as shown in Fig. 7–2, and then upright the front panel assembly as shown in Fig. 7–3.
2. Start moving the doors of DECK I and DECK II open at the same time. When either door is fully open, confirm that the difference between that door and the other door is equal to or less than 15 mm.
3. If the specifications of steps 1 and 2 above are not satisfied, adjust by changing the position where the door coil spring is mounted, as follows.
   - When DECK I door moves more slowly than DECK II door, change the position of the DECK I door coil spring from Ⓐ to Ⓑ.
   - When DECK I door moves faster than DECK II door, change the position of the DECK II door coil spring from Ⓐ to Ⓑ.

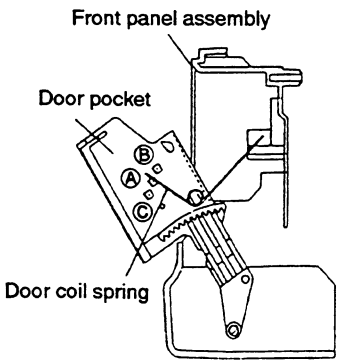


Fig. 7–2

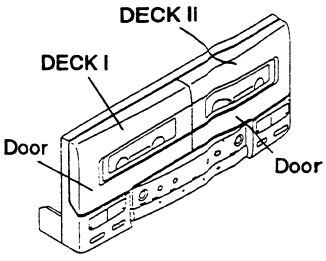


Fig. 7–3

7.2 PERPARATION FOR ADJUSTMENT OF HEAD ANGLE

1. Push the EJECT knob, and make the cassette door open. (See Fig. 7–4.)
2. Take the door panel off, as shown with an arrow in Fig. 7–4. Take the DECK I and DECK II doors off, one after the other.

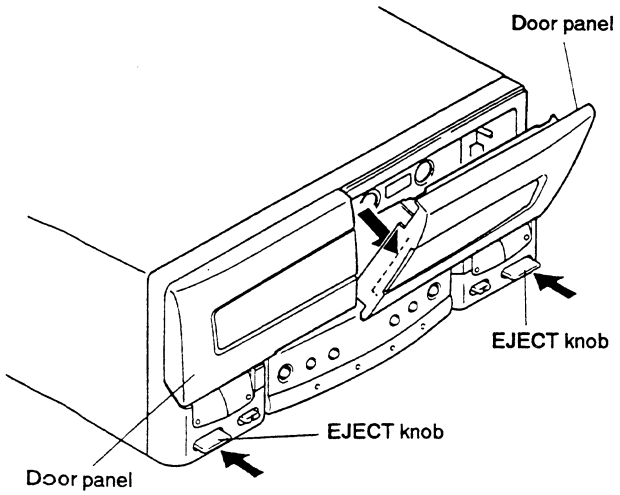


Fig. 7–4

3. Close the door pockets of DECK I and DECK II, and then insert a screwdriver in the slit of the center panel. Push the two hooks, and take off the center panel. (See Fig. 7–5.)

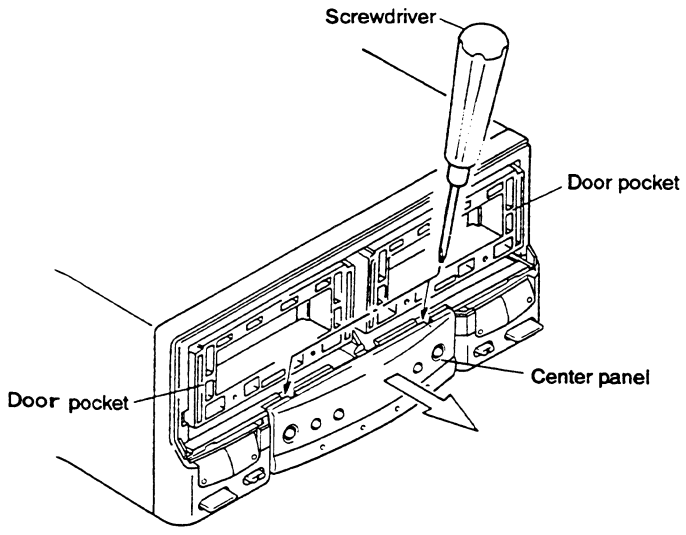


Fig. 7–5

4. Insert t. screwdriver in each of the four holes on the front panel, and make azimuth adjustment. (See Fig. 7–6.)

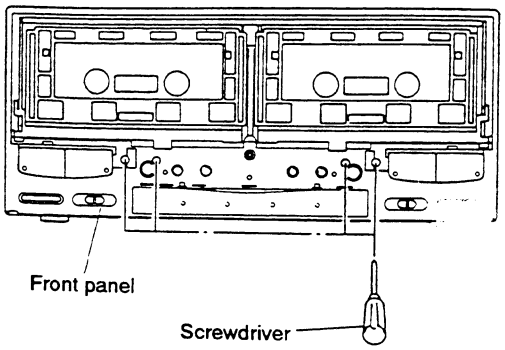


Fig. 7–6

7.3 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

1. The mechanical adjustments must be completed first.
2. The head must be cleaned and demagnetized.
3. Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
4. The reference signal is 0 dBV=1 Vrms.
5. Connect a 50 kΩ (or between 47k to 52 kΩ) load resistance to the OUTPUT terminals.
6. Unless otherwise specified, the switches listed below are left in the positions indicated.
   DOLBY NR : OFF

Test Tapes

STD–331E : Playback adjustments (See Fig. 7–7)
STD–631 : NORMAL blank tape
STD–621 : CrO_2 blank tape
STD–610 : METAL blank tape

List of Adjustments

Playback sections

1. Head azimuth adjustment.
2. Playback level adjustment.

Recording sections

1. Bias oscillator adjustment.
2. Recording bias adjustment.
3. Recording level adjustment.

NOTE: This unit has an automatic tape selection feature.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

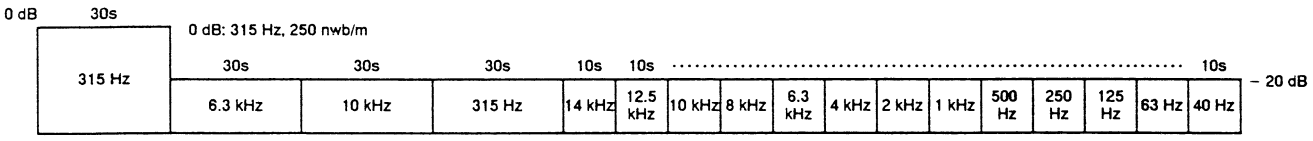


Fig. 7–7 Constants of the test tape STD–331E

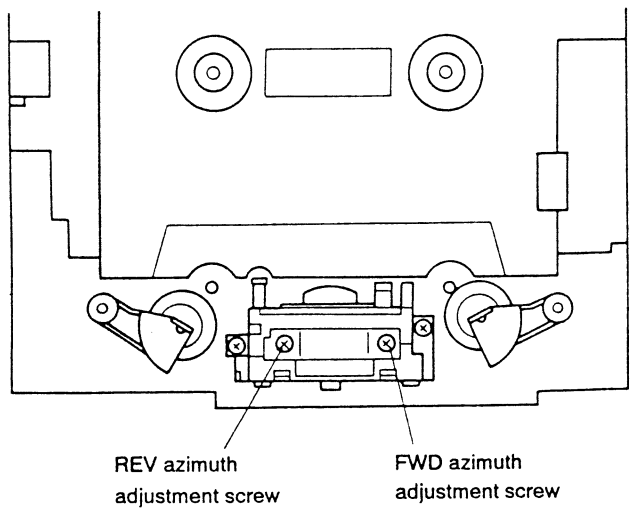


Fig. 7–8 Head azimuth adjustment

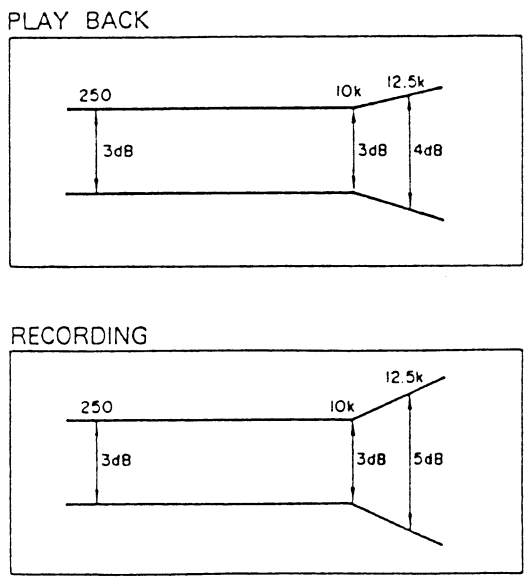


Fig. 7–9 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR451, VR452 (Deck I) or VR453, VR454 (Deck II) to mec

No.	Mode	Input signal & test tape	Adjustment locat
1.	PLAY	Play the 10 kHz/–20 dB section of STD–331E test tape.	Head azimuth adjustr screw. (See Fig. 7–8)
2.	STOP	Lock the screw with screw lock after completing adju	

2. Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be

No.	Mode	Input signal & test tape	Adjustment locat	
1.	PLAY	Play the 315 Hz/0 dB section of the STD–331E test tape.	Deck I	VR451 (Lc VR452 (Rc
			Deck II	VR453 (Lc VR454 (Rc

RECORDING SECTION

1. Bias Oscillator Adjustment (CT–P930WR and CT–

No.	Mode	Input signal & test tape	Adjustment locat	
1.	REC	Load the STD–610 test tape with no input signal.	Deck II	L581

2. Recording Bias Adjustment

- After the adjustment, caution should be exercised so as not to b

No.	Mode	Input signal & test tape	Adjustment locat	
1.	STOP	Load the STD–631 (NORMAL) test tape.		
2.	REC → PLAY	Record the 315 Hz and 6.3 kHz signals at –26 dBV input level and playback.	Deck II	VR701 (L VR411 *
				VR702 (R VR412 *

3. Recording Level Adjustment

No.	Mode	Input signal & test tape	Adjustment locati	
1.	REC/ PAUSE	Apply a 315 Hz signal to the line input terminals, load the STD–631 test tape.	Volume of the output l the oscillator	
2.	REC → PLAY	Record the above signal onto the STD–631 test tape, and playback.	Deck II	VR521 (VR522 (
3.	REC → PLAY	Record the above signal onto the STD–621 test tape, and playback.	Check	
4.	REC → PLAY	Record the above signal onto the STD–610 test tape, and playback.	Check	

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR451, VR452 (Deck I) or VR453, VR454 (Deck II) to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/–20 dB section of STD–331E test tape.	Head azimuth adjustment screw. (See Fig. 7–8)	LINE OUT L – R terminal (Pins 12 , 13 of CN41)	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

2. Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 315 Hz/0 dB section of the STD–331E test tape.	Deck I	VR451 (Lch) VR452 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	–8.7 dBV	
			Deck II	VR453 (Lch) VR454 (Rch)			

RECORDING SECTION

1. Bias Oscillator Adjustment (CT–P930WR and CT–P830WR only)

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Load the STD–610 test tape with no input signal.	Deck II	L581	TP11	106 kHz ± 0.5 kHz	

2. Recording Bias Adjustment

- After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	STOP	Load the STD–631 (NORMAL) test tape.					
2.	REC → PLAY	Record the 315 Hz and 6.3 kHz signals at –26 dBV input level and playback.	Deck II	VR701 (Lch) VR411 *	LINE OUT L – R terminal (Pins 12 , 13 of CN41)	Repeatedly record, playback and adjust so that the plyaback level of 6.3 kHz signal becomes +0.5 dB ± 0.5 dB when compared with the 315 Hz signal.	* CT–P730WR only
				VR702 (Rch) VR412 *			

3. Recording Level Adjustment

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz signal to the line input terminals, load the STD–631 test tape.	Volume of the output level of the oscillator		TP. 1 (Lch) TP. 2 (Rch)	–11.2 dBV	
2.	REC → PLAY	Record the above signal onto the STD–631 test tape, and playback.	Deck II	VR521 (Lch) VR522 (Rch)		Repeatedly record, playback and adjust so that the playback signal level becomes –11.2 dBV.	
3.	REC → PLAY	Record the above signal onto the STD–621 test tape, and playback.	Check			–11.2 dBV ± 1.5 dB	
4.	REC → PLAY	Record the above signal onto the STD–610 test tape, and playback.	Check			–11.2 dBV ± 1.5 dB	

8. FOR CT-P930WR/AEM, CT-P730WR/AB, ADL A

8.1 CONTRAST OF MISCELLANEOUS P

NOTES:
- Parts marked by "NSP" are generally unavailable because they are n
- The ⚠ mark found on some component parts indicates the importa identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery ti

CT-P930WR/AEM, CT-P830WR/ADL, AE AB have the same construction except

Mark	Symbol & Description	CT-P930WR/ AB type	CT-P930WR AEM type
	DOLBY HX PRO unit	RWZ2716	RWZ2716
	MAIN unit	RWZ2717	RWZ2717
NSP	HALF LED 1 unit	RWZ2719	RWZ2719
NSP	HALF LED 2 unit	RWZ2720	RWZ2720
	Door lens (L)	RAH2100	RAH2100
	Door lens (R)	RAH2101	RAH2101
	Door panel	RAH2138	RAH2138
NSP	Door panel (L)	REA1021	REA1021
NSP	Door panel(R)	REA1022	REA1022
	Spot lens	RNK1847	RNK1847
NSP	Rear panel	RNA1618	RNA1619
	Packing case	RHG1416	RHG1416
	Caution card	RRN1001	.....

MAIN UNIT

- **Although RWZ2925 and RWZ2717 are service parts.**
- **RWZ2926 and RWZ2717 have the sam**

Mark	Symbol & Description
	Q581, Q582 Q814 L581 T581 C403 C417, C418 C581 C582 C583, C584 C588 R582, R583 R585 (160 Ω /0.5W) R585 (150 Ω /0.5W) R586 (200 Ω /0.5W) R586 (120 Ω /0.5W) VR411, VR412 (220k Ω) CN51 CN52

chanical center positions.

ation	Measuring location	Adjustment value	Remarks
tment	LINE OUT L – R terminal (Pins 12 , 13 of CN41)	Maximum playback signal level.	
justment.			

performed with great care.

ation	Measuring location	Adjustment value	Remarks
Lch) Rch)	TP. 1 (Lch) TP. 2 (Rch)	–6.7 dBV	
Lch) Rch)			

-P830WR only)

ation	Measuring location	Adjustment value	Remarks
	TP11	106 kHz ± 0.5 kHz	

become under bias by checking the distortion rate.

ation	Measuring location	Adjustment value	Remarks
(Lch) (Rch)	LINE OUT L – R terminal (Pins 12 , 13 of CN41)	Repeatedly record, playback and adjust so that the plyaback level of 6.3 kHz signal becomes +0.5 dB ± 0.5 dB when compared with the 315 Hz signal.	* CT-P730WR only

ation	Measuring location	Adjustment value	Remarks
t level of	TP. 1 (Lch) TP. 2 (Rch)	–11.2 dBV	
(Lch) (Rch)		Repeatedly record, playback and adjust so that the playback signal level becomes –11.2 dBV.	
		–11.2 dBV ± 1.5 dB	
		–11.2 dBV ± 1.5 dB	

8. FOR CT-P930WR/AEM, CT-P830WR/ADL, AEM, CT-P730WR/AB, ADL AND AEM

8.1 CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

CT-P930WR/AEM, CT-P830WR/ADL, AEM, CT-P730WR/AB, ADL, AEM and CT-P930WR/AB have the same construction except for the following:

Mark	Symbol & Description	Part No.							Remarks
		CT-P930WR/ AB type	CT-P930WR/ AEM type	CT-P830WR/ ADL type	CT-P830WR/ AEM type	CT-P730WR/ AB type	CT-P730WR/ ADL type	CT-P730WR/ AEM type	
	DOLBY HX PRO unit	RWZ2716	RWZ2716	RWZ2716	RWZ2716	.....	.....	.....	
	MAIN unit	RWZ2717	RWZ2717	RWZ2925	RWZ2925	RWZ2926	RWZ2926	RWZ2926	
NSP	HALF LED 1 unit	RWZ2719	RWZ2719	.....	.....	.....	.....	.....	
NSP	HALF LED 2 unit	RWZ2720	RWZ2720	.....	.....	.....	.....	.....	
	Door lens (L)	RAH2100	RAH2100	RAH2100	RAH2100	RAH2143	RAH2143	RAH2143	
	Door lens (R)	RAH2101	RAH2101	RAH2101	RAH2101	RAH2144	RAH2144	RAH2144	
	Door panel	RAH2138	RAH2138	RAH2140	RAH2140	RAH2141	RAH2141	RAH2141	
NSP	Door panel (L)	REA1021	REA1021	REA1023	REA1023	REA1025	REA1025	REA1025	
NSP	Door panel(R)	REA1022	REA1022	REA1024	REA1024	REA1026	REA1026	REA1026	
	Spot lens	RNK1847	RNK1847	.....	.....	.....	.....	.....	
NSP	Rear panel	RNA1618	RNA1619	RNA1624	RNA1624	RNA1625	RNA1626	RNA1626	
	Packing case	RHG1416	RHG1416	RHF1038	RHG1417	RHG1419	RHF1039	RHG1419	
	Caution card	RRN1001	.....	.....	.....	RRN1001	.....	.....	

MAIN UNIT

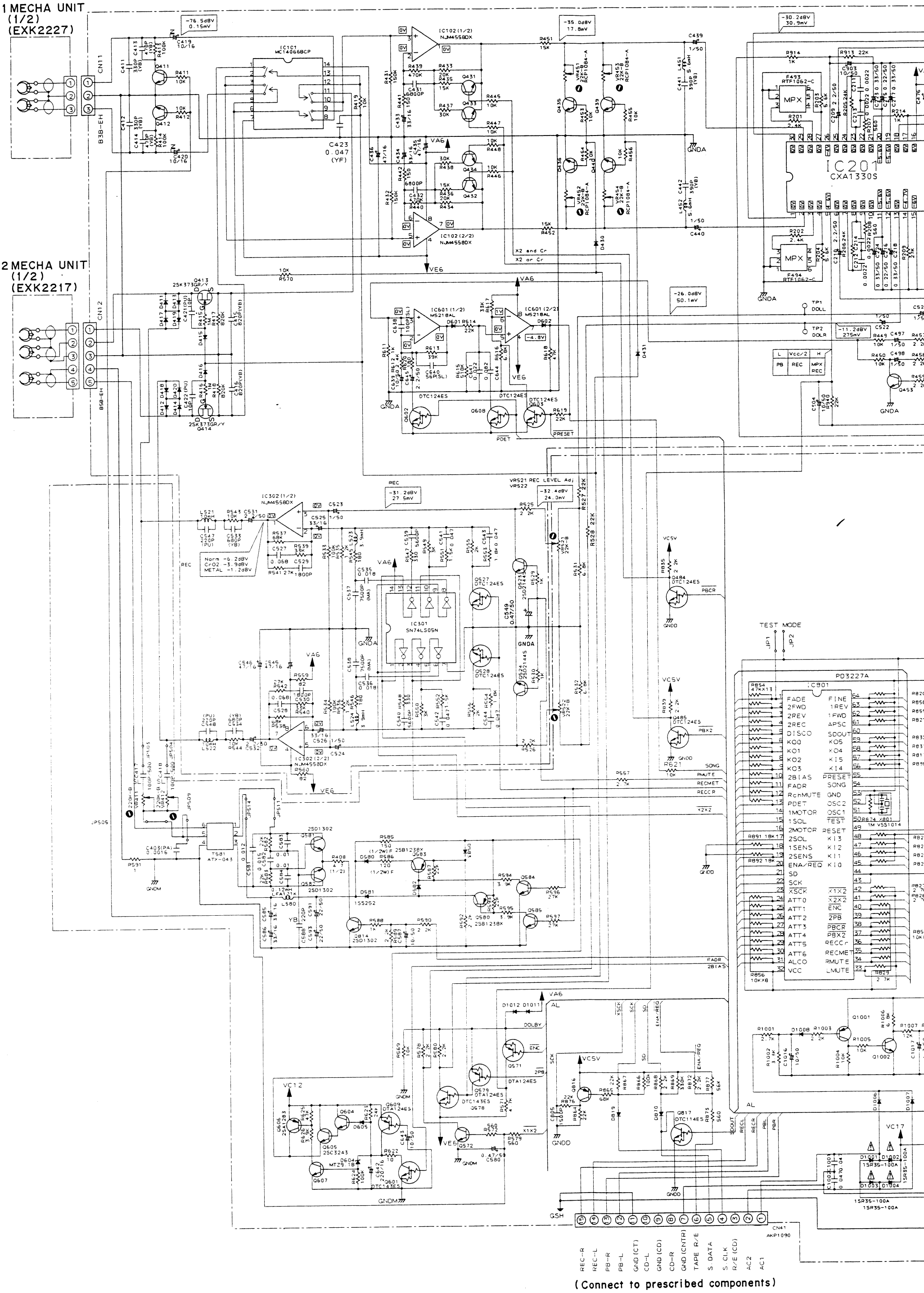
- **Although RWZ2925 and RWZ2717 are different in part number, they have the same service parts.**
- **RWZ2926 and RWZ2717 have the same construction except for the following:**

Mark	Symbol & Description	Part No.		Remarks
		RWZ2717	RWZ2926	
	Q581, Q582	2SC1815	2SD1302	
	Q814	2SD2144S	2SD1302	
	L581	RTD1062	.....	
	T581	.....	ATX – 043	
	C403	CQPA752J100	CQPA162J100	
	C417, C418	.....	CCCSL101K500	
	C581	CFTXA223J50	CFTXA123J50	
	C582	CFTXA332J50	CFTXA153J50	
	C583, C584	CFTXA332J50	CFTXA103J50	
	C588	.....	CKPUYB221K50	
	R582, R583	RD1/6PM123J	RD1/6PM223J	
	R585 (160 Ω /0.5W)	RCN1026	.....	
	R585 (150 Ω /0.5W)	.....	RCN1041	
	R586 (200 Ω /0.5W)	RCN1036	.....	
	R586 (120 Ω /0.5W)	.....	RCN1020	
	VR411, VR412 (220k Ω)	.....	RCP1049	
	CN51	B5B – XA – A	.....	
	CN52	B6B – XH – A	.....	

8.2 SCHEMATIC DIAGRAMS

1 MECHA UNIT (1/2) (EXK2227)

2 MECHA UNIT (1/2) (EXK2217)



REAR UNIT(RWZ2718)

Note: (Type 6)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭ : DC voltage (V) in STOP mode unless otherwise noted.
   ⇨ mA or ← mA : DC current in STOP mode unless otherwise noted.

IC201 CXA1330S

IC801 PD3227A

IC701 M51132L

Q494 2SC1740SLN

Q493 2SC1740SLN

Q1004 2SC3246

Q484 DTC124ES

Q485 DTC124ES

Q817 DTC114ES

Q816 DTC143ES

Q821 DTA144ES

Q822 DTA144ES

Q850 2SA1283

Q851 2SA1283

Q852 2SA1283

Q853 2SA1283

Q823 DTC114ES

Q805 DTC114ES

Q824 DTC114ES

Q828 DTC124ES

Q495 DTC124ES

Q496 DTC124ES

Q497 DTC124ES

Q498 DTC124ES

Q499 DTC124ES

Q500 DTC124ES

Q501 DTC124ES

Q453

Q439

Q440

Q441

Q442

Q483

Q487

Q488

Q489

Q490

Q491

Q492

D430

D431

D491

D492

D801

D802

D803

D804

D805

D806

D807

D808

D809

D810

D811

D812

D813

D814

D1001

D1002

D1003

D1004

D1005

D1006

D1007

D1008

D1009

D1010

F493 RTF1062-C

F494 RTF1062-C

MPX

TP1 DOLL

TP2 DOLR

-30.2dBV 30.9mV

-4.8dBV 575mV

-26.0dBV 50.1mV

-11.2dBV 275mV

35.0dBV 17.8mV

VA6

VE6

VA10

VC5V

VC12

VC17

GNDA

GNDD

GNDM

GNDB

1 MECHA UNIT(2/2) (EXK2227)

2 MECHA UNIT(2/2)(EXK22

OPERATE UNIT(RWZ2715)

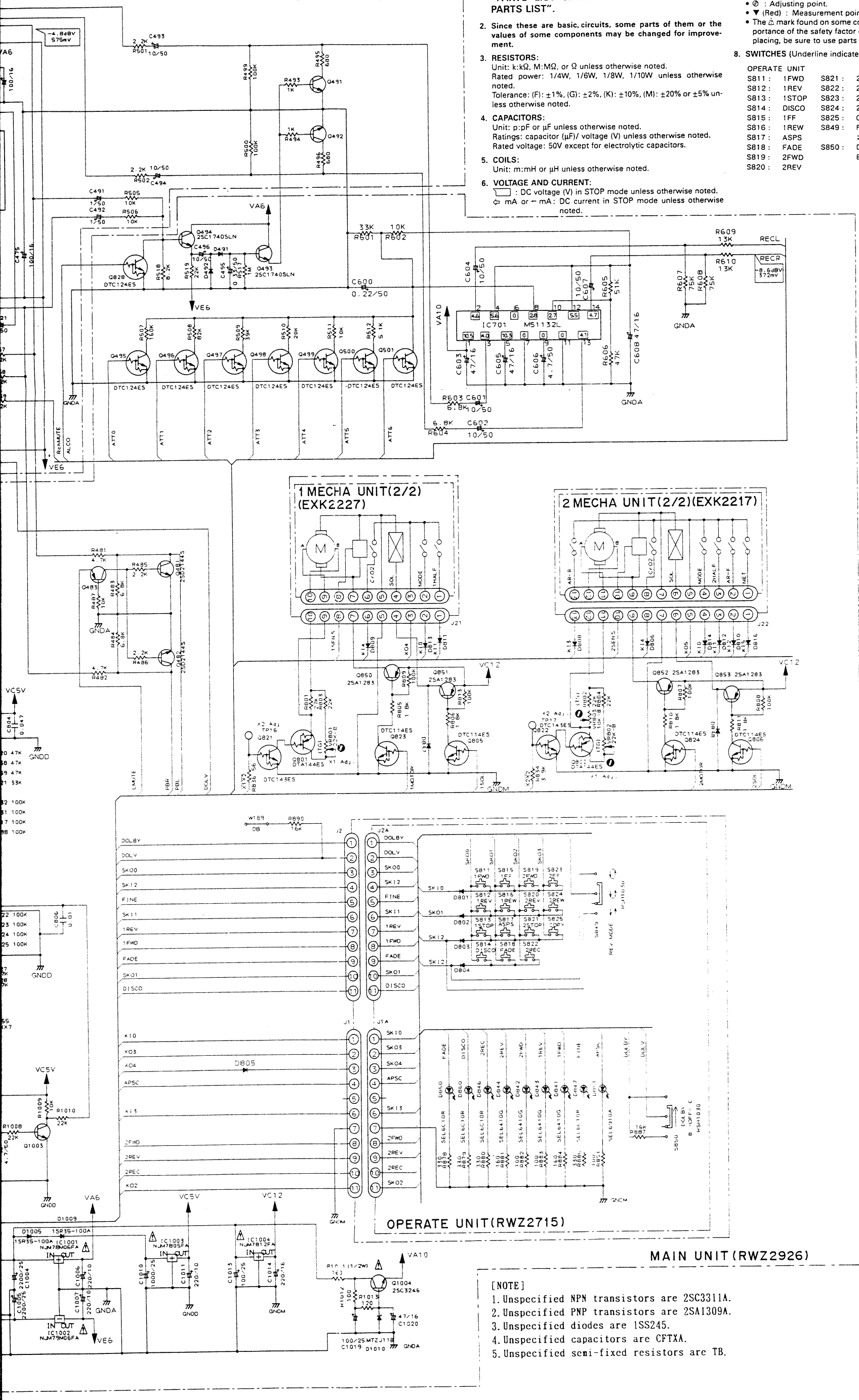
MAIN UNIT(

[NOTE]
1. Unspecified NPN transistors are 2SC3311A.
2. Unspecified PNP transistors are 2SA1309A.
3. Unspecified diodes are 1SS245.
4. Unspecified capacitors are CFTXA.
5. Unspecified semi-fixed resistors are TB.

(Connect to prescribed components)

4 5 6 7 8

REAR UNIT (RWZ2718)



OPERATE UNIT(RWZ2715)

MAIN UNIT(RWZ2926)

Note: (Type 6)

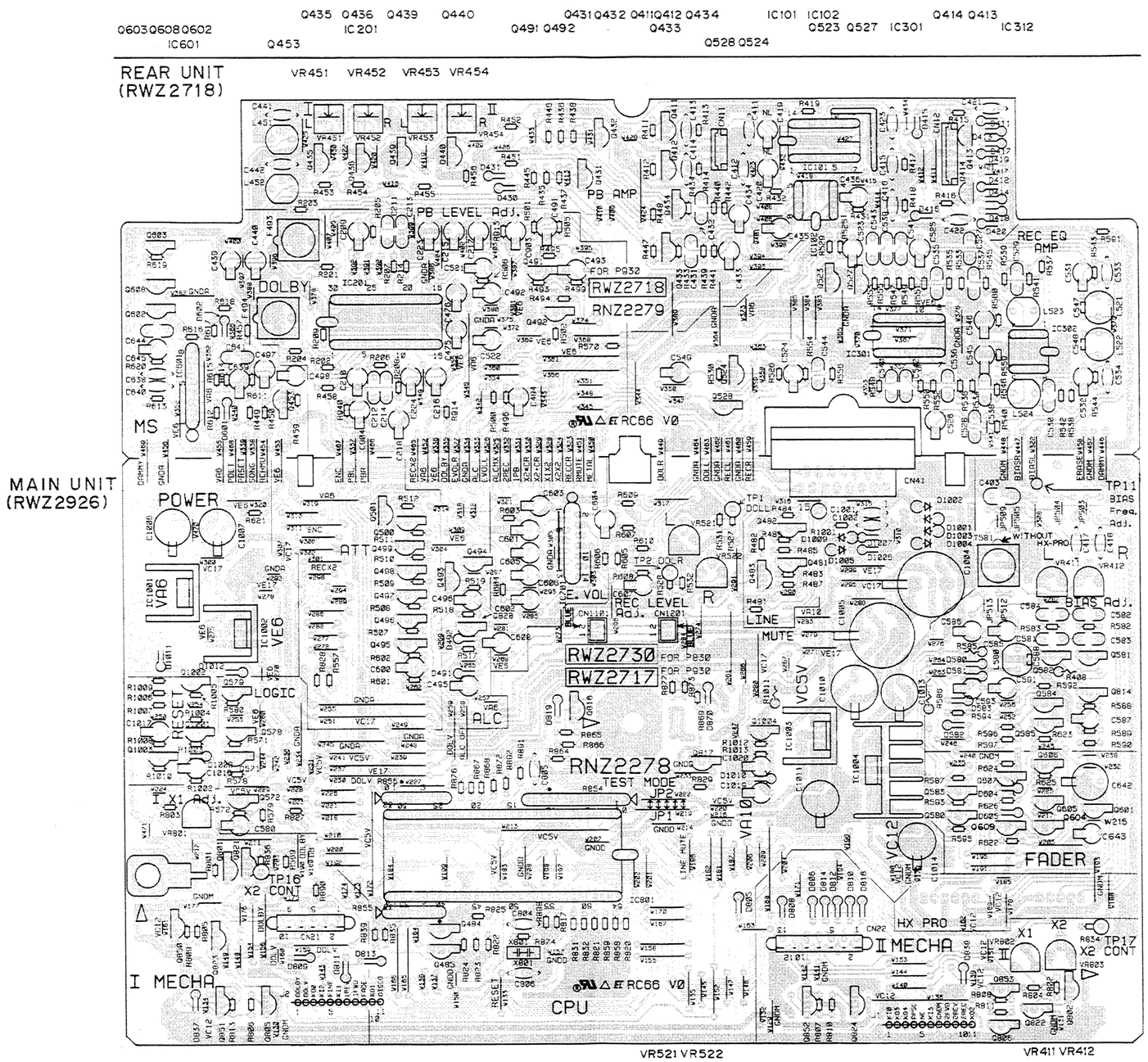
1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭ : DC voltage (V) in STOP mode unless otherwise noted.
   ⇦ mA or — mA : DC current in STOP mode unless otherwise noted.
7. **OTHERS:**
   - ➡ : Signal route.
   - ⊘ : Adjusting point.
   - ▼ (Red) : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SWITCHES** (Underline indicates switch position):

OPERATE UNIT			
S811 :	1FWD	S821 :	2STOP
S812 :	1REV	S822 :	2REC
S813 :	1STOP	S823 :	2FF
S814 :	DISCO	S824 :	2REW
S815 :	1FF	S825 :	COPY
S816 :	1REW	S849 :	REV. MODE
S817 :	ASPS		⇄ ⇆ ↻
S818 :	FADE	S850 :	DOLBY
S819 :	2FWD		B — OFF — C
S820 :	2REV		

[NOTE]
1. Unspecified NPN transistors are 2SC3311A.
2. Unspecified PNP transistors are 2SA1309A.
3. Unspecified diodes are 1SS245.
4. Unspecified capacitors are CFTXA.
5. Unspecified semi-fixed resistors are TB.

8.3 PCB CONNECTION DIAGRAMS

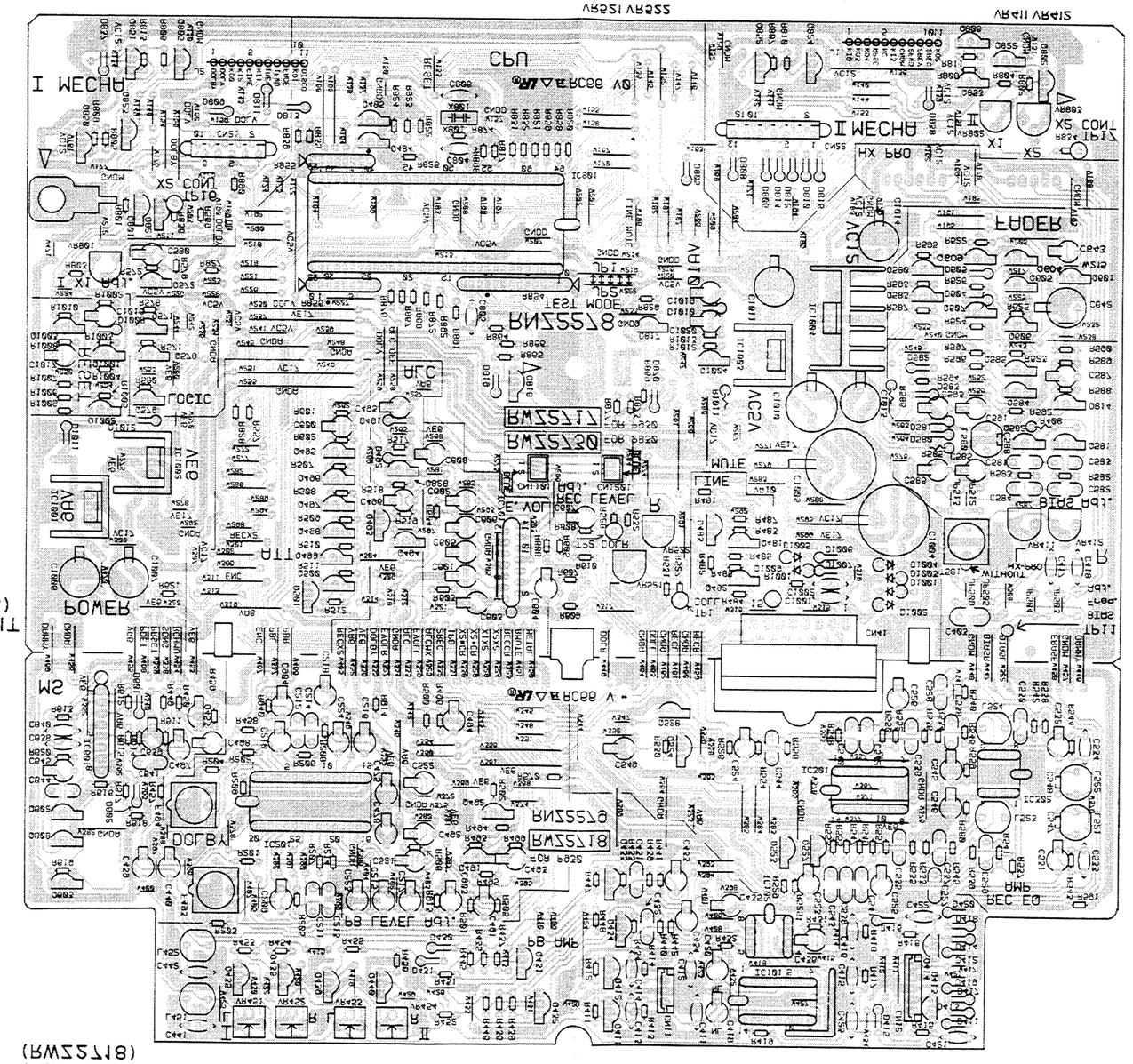
- View from component side



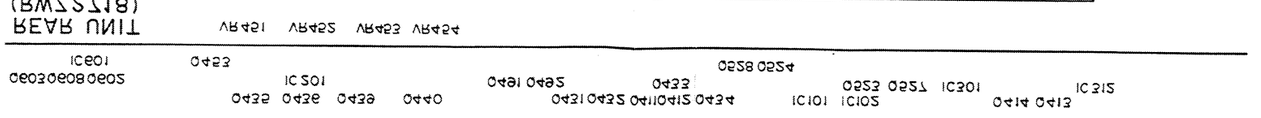
8.3 PCB CONNECTION DIAGRAMS

• View from soldering side

MAIN UNIT (RWZ2562)

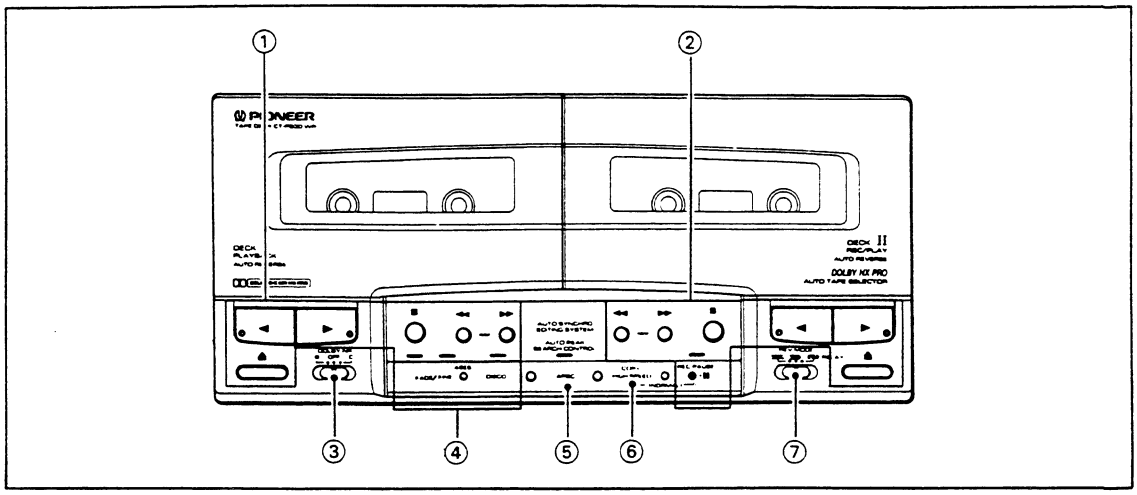


REAR UNIT (RWZ2718)



9. PANEL FACILITIES AND SPECIFICATIONS

STEREO DOUBLE CASSETTE DECK: CT-P930WR



① Deck I operating buttons

◀, ▶ : Play
⏏ : Eject cassette (cassette door opens)
■ : Stop
◀◀, ▶▶ : Rewind, fast forward

② Deck II operating buttons

◀, ▶ : Play
⏏ : Eject cassette (cassette door opens)
■ : Stop
◀◀, ▶▶ : Rewind, fast forward
● ❚❚ REC PAUSE
: Temporarily pause recording.

③ DOLBY* NR selector switch (DOLBY NR B/OFF/C)

Use to select Dolby noise reduction.

*
- *Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.*
- *"DOLBY", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.*

④ ASES button (ASES FADE/FINE, DISCO)

Use these buttons for automatic editing of CD tracks when recording on cassette tapes.

⑤ Auto Peak Search Control button (APSC)

When recording is performed with this button in the ON position, the recording level will be set automatically to produce the optimum dynamic range for the tape.
This button does not function during use of the tape copy function.

⑥ COPY button

Use to perform copying of one cassette tape to another. Two speeds are available, NORMAL and HIGH-SPEED (twice normal speed).

⑦ Reverse mode switch (REV MODE ⇄ / ⇉ / ↻ RELAY)

Use to select the tape-travel mode
⇄ : Play back one side only.
⇉ : One full play (forward and reverse sides) of the cassette tape in either deck I or deck II.
↻ RELAY : Continuous auto-reverse play of the tapes in decks I and II, beginning from the forward (▶) direction.

DOUBLE CASSETTE DECK: CT-P930WR

Tracks ..... 4-track, 2-channel stereo
Playback head ..... Hard permaloy (×1)
Recording/Playback head ..... Hard permaloy (×1)
Erasing head ..... Ferrite (×1)
Motor ..... DC servo 2-speed motor (×2)
Wow and flutter ..... 0.09% (WRMS)
Rewind/Fast forward time ..... about 120 seconds (with C-60 tape)
Frequency response:
TYPE IV (metal) tape ... 35 Hz–16,000 Hz ±6 dB (recorded at −20 dB)
TYPE II (high/CrO_2) tape ..... 35 Hz–15,000 Hz ±6 dB (recorded at −20 dB)
TYPE I (normal) tape ... 35 Hz–14,000 Hz ±6 dB (recorded at −20 dB)
S/N ratio ..... 56 dB
- With Dolby B type NR ON ..... 10 dB improvement at 5 kHz
- With Dolby C type NR ON ..... 19 dB improvement at 5 kHz

Other

Dimensions ..... 260 (W) × 117 (H) × 243 (D) mm
Weight ..... 2.7 kg